

CLAIMS

What is claimed is:

1. A method for positioning a cable in an aircraft, in a space between the aircraft outer frame and an inner shell such as a cabin wall or ceiling and behind a structure such as a storage bin mounted to the inner shell, the aircraft frame having a plurality of stringers affixed to an interior surface of the frame, the inner shell including a plurality of removable panels, the method comprising the steps of:

enclosing a portion of the cable in a length of flexible conduit;

removing panels respectively adjacent at least one of first and second ends of the structure to partially expose the space and at least one stringer accessible within the space;

directing the conduit into the space from adjacent one of the first and second ends of the structure until the conduit passes the other one of said first and second ends of the structure; and

fastening the conduit to the at least one stringer.

2. The method of claim 1 wherein the step of enclosing a portion of the cable comprises the step of slitting the conduit lengthwise.

3. The method of claim 2 further comprising the step of tying the slit conduit in at least one location after enclosing the cable portion in the conduit.

4. The method of claim 3 wherein tying the slit conduit comprises tie wrapping the conduit at a plurality of equally spaced locations.

5. The method of claim 1 wherein the step of fastening the conduit to the at least one stringer comprises inserting the conduit into a C-clamp attached to the stringer.

6. The method of claim 1 wherein the step of enclosing a portion of the cable in the conduit comprises selecting a length for the conduit sufficient to span the structure.

7. The method of claim 1 wherein said steps are performed without removing the structure.

8. The method of claim 1 wherein the step of directing the conduit into the space comprises the step of flexing the conduit.

9. The method of claim 1 further comprising the step of adjusting the cable relative to the conduit and relative to a cable connector.

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10. An apparatus for positioning a cable in an aircraft, in a space between the aircraft outer frame and an inner shell such as a cabin wall or ceiling and behind a structure such as a storage bin mounted to the inner shell, the aircraft frame having a plurality of stringers affixed to an interior surface of the frame, the inner shell including a plurality of panels which are removable to partially expose the space and at least one of the stringers, the apparatus comprising:

a flexible conduit configured to be directed into and through the space behind the structure while enclosing a portion of the cable and after at least one of the panels has been removed, the conduit comprising a length sufficient at least to span the structure; and

at least one fastener for attaching an end of the conduit to the at least one of the stringers.

11. The apparatus of claim 10 wherein the conduit comprises:

a lengthwise slit through which the cable portion is inserted; and

at least one tie-wrap fastener configured to constrain the conduit around the cable while allowing movement of the cable through the conduit.

12. The apparatus of claim 11 wherein the at least one tie-wrap fastener comprises a plurality of tie-wrap fasteners equally spaced along the conduit.

13. The apparatus of claim 11 wherein the at least one fastener comprises a C-clamp attached to the at least one stringer.

14. The apparatus of claim 10 wherein the conduit comprises a flexibility less than a flexibility of the cable.

15. A method for positioning a cable in a recess behind a structure such as a storage bin mounted on an aircraft cabin wall, wherein the recess extends between the structure and an interior surface of the aircraft frame upon which are mounted a plurality of stringers, the method comprising the steps of:

without removing the structure, removing at least one of a ceiling panel and a wall panel adjacent the structure to partially expose the recess and at least one of the stringers;

enclosing a portion of the cable in a flexible conduit;

directing the conduit into the recess until the conduit spans the structure; and

fastening at least one end of the conduit to the at least one stringer.

16. The method of claim 14 wherein the step of enclosing a portion of the cable comprises slitting the conduit lengthwise.

17. The method of claim 14 wherein the step of fastening at least one end of the conduit comprises inserting the end into a C-clamp attached to one of the stringers.

18. The method of claim 15 further comprising the step of pulling the cable through the conduit to adjust the cable relative to a cable connector.